WHAT IS CLAIMED IS:

1. Isolated nucleic acid having at least 80% nucleic acid sequence identity to:

(a) a nucleotide sequence that encodes the amino acid sequence shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:4) or Figure 6 (SEQ ID NO:6);

(b) the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3) or Figure 5 (SEQ ID NO:5);

(c) the full-length coding sequence of the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3), or Figure 5 (SEQ ID NO:5) or

(d) the complement of (a), (b), (c).

2. Isolated nucleic acid comprising:

(a) a nucleotide sequence that encodes the amino acid sequence shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:4), or Figure 6 (SEQ ID NO:6);

(b) the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3) Figure 5 (SEQ ID NO:5) or

(d) the complement of (a), (b), (c).

3. Isolated nucleic acid that hybridizes to:

(a) a nucleotide sequence that encodes the amino acid sequence shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:4) or Figure 6 (SEQ ID NO:6);

(b) the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3) or Figure 5 (SEQ ID NO:5);

(c) the full-length coding sequence of the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3) or Figure 5 (SEQ ID NO:5) or

(d) the complement of (a), (b), (c), (d).

4. The nucleic acid of Claim 3, wherein the hybridization occurs under stringent conditions.

5. An expression vector comprising the nucleic acid of Claim 1.

6. The expression vector of Claim 5, wherein said nucleic acid is operably linked to control sequences recognized by a host cell transformed with the vector.

7. A host cell comprising the expression vector of Claim 6.

8. The host cell of Claim 7 which is a CHO cell, an *E. coli* cell or a yeast cell.

9. A process for producing a polypeptide comprising culturing the host cell of Claim 7 under conditions suitable for expression of said polypeptide and recovering said polypeptide from the cell culture.

10. An isolated polypeptide having at least 80% amino acid sequence identity to:

(a) the amino acid sequence shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:4) or Figure 6 (SEQ ID NO:6);

(b) an amino acid sequence encoded by the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3) or Figure 5 (SEQ ID NO:5);

(c) an amino acid sequence encoded by the full-length coding sequence of the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3) or Figure 5 (SEQ ID NO:5).

11. An isolated polypeptide comprising:

(a) the amino acid sequence shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:4) or Figure 6 (SEQ ID NO:6);

(b) an amino acid sequence encoded by the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3) or Figure 5 (SEQ ID NO:5);

(c) an amino acid sequence encoded by the full-length coding sequence of the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3) or Figure 5 (SEQ ID NO:5).

12. A chimeric polypeptide comprising the polypeptide of Claim 10 fused to a heterologous polypeptide.

13. The chimeric polypeptide of Claim 12, wherein said heterologous polypeptide is an epitope tag sequence or an Fc region of an immunoglobulin.

14. An isolated antibody which specifically binds to a polypeptide having at least 80% amino acid sequence identity to:

(a) the amino acid sequence shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:4) or Figure 6 (SEQ ID NO:6);

(b) an amino acid sequence encoded by the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3) or Figure 5 (SEQ ID NO:5);

(c) an amino acid sequence encoded by the full-length coding sequence of the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3) or Figure 5 (SEQ ID NO:5).

15. The antibody of Claim 14 which specifically binds to a polypeptide comprising:

(a) the amino acid sequence shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:4) or Figure 6 (SEQ ID NO:6);

(b) an amino acid sequence encoded by the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3) or Figure 5 (SEQ ID NO:5);

(c) an amino acid sequence encoded by the full-length coding sequence of the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3) or Figure 5 (SEQ ID NO:5).

16. The antibody of Claim 14 which is a monoclonal antibody.

17. The antibody of Claim 14 which is an antibody fragment.

18. The antibody of Claim 14 which is a chimeric or a humanized antibody.

19. The antibody of Claim 14 which is conjugated to a growth inhibitory agent.

20. The antibody of Claim 14 which is conjugated to a cytotoxic agent.

21. The antibody of Claim 20, wherein the cytotoxic agent is selected from the group consisting of toxins, antibiotics, radioactive isotopes and nucleolytic enzymes.

22. The antibody of Claim 20, wherein the cytotoxic agent is a toxin.

23. The antibody of Claim 22, wherein the toxin is selected from the group consisting of maytansinoid and calicheamicin.

24. The antibody of Claim 22, wherein the toxin is a maytansinoid.

25. The antibody of Claim 14, which is produced in bacteria.

26. The antibody of Claim 14, which is produced in CHO cells.

27. The antibody of Claim 14, which induces death of a cell to which it binds.

28. The antibody of Claim 14, which is detectably labeled.

29. An isolated nucleic acid comprising a nucleotide sequence that encodes the antibody of Claim 14.

30. An expression vector comprising the nucleic acid of Claim 29 operably linked to control sequences recognized by a host cell transformed with the vector.

31. A host cell comprising the expression vector of Claim 30.

32. The host cell of Claim 31, which is a CHO cell, an *E. coli* cell or a yeast cell.

33. A process for producing an antibody comprising culturing the host cell of Claim 31 under conditions suitable for expression of said antibody and recovering said antibody from the cell culture.

34. An isolated oligopeptide which binds to a polypeptide having at least 80% amino acid sequence identity to:

(a) the amino acid sequence shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:4) or Figure 6 (SEQ ID NO:6);

(b) an amino acid sequence encoded by the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3) or Figure 5 (SEQ ID NO:5);

(c) an amino acid sequence encoded by the full-length coding sequence of the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3) or Figure 5 (SEQ ID NO:5).

35. The oligopeptide of Claim 34, which binds to a polypeptide comprising:

(a) the amino acid sequence shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:4) or Figure 6 (SEQ ID NO:6);

(b) an amino acid sequence encoded by the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3) or Figure 5 (SEQ ID NO:5);

(c) an amino acid sequence encoded by the full-length coding sequence of the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3) or Figure 5 (SEQ ID NO:5).

36. The oligopeptide of Claim 34, which is conjugated to a growth inhibitory agent.

37. The oligopeptide of Claim 34, which is conjugated to a cytotoxic agent.

38. The oligopeptide of Claim 37, wherein the cytotoxic agent is selected from the group consisting of toxins, antibiotics, radioactive isotopes and nucleolytic enzymes.

39. The oligopeptide of Claim 37, wherein the cytotoxic agent is a toxin.

40. The oligopeptide of Claim 39, wherein the toxin is selected from the group consisting of maytansinoid and calicheamicin.

41. The oligopeptide of Claim 39, wherein the toxin is a maytansinoid.

42. The oligopeptide of Claim 34, which induces death of a cell to which it binds.

43. The oligopeptide of Claim 34, which is detectably labeled.

44. A TASK binding organic molecule which binds to a polypeptide having at least 80% amino acid sequence identity to:

(a) the amino acid sequence shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:4) or Figure 6 (SEQ ID NO:6);

(b) an amino acid sequence encoded by the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3) or Figure 5 (SEQ ID NO:5);

(c) an amino acid sequence encoded by the full-length coding sequence of the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3) or Figure 5 (SEQ ID NO:5).

45. The organic molecule of Claim 44, which binds to a polypeptide comprising:

(a) the amino acid sequence shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:4) or Figure 6 (SEQ ID NO:6);

(b) an amino acid sequence encoded by the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3) or Figure 5 (SEQ ID NO:5);

(c) an amino acid sequence encoded by the full-length coding sequence of the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3) or Figure 5 (SEQ ID NO:5).

46. The organic molecule of Claim 44, which is conjugated to a growth inhibitory agent.

47. The organic molecule of Claim 44, which is conjugated to a cytotoxic agent.

48. The organic molecule of Claim 47, wherein the cytotoxic agent is selected from the group consisting of toxins, antibiotics, radioactive isotopes and nucleolytic enzymes.

49. The organic molecule of Claim 47, wherein the cytotoxic agent is a toxin.

50. The organic molecule of Claim 49, wherein the toxin is selected from the group consisting of maytansinoid and calicheamicin.

51. The organic molecule of Claim 49, wherein the toxin is a maytansinoid.

52. The organic molecule of Claim 44, which induces death of a cell to which it binds.

53. The organic molecule of Claim 44, which is detectably labeled.

54. A TASK binding interfering RNA (siRNA) which binds to a nucleic acid having at least 80% sequence identity to:

(a) a nucleotide sequence that encodes the amino acid sequence shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:4) or Figure 6 (SEQ ID NO:6);

(b) the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3) or Figure 5 (SEQ ID NO:5);

(c) the full-length coding sequence of the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3), or Figure 5 (SEQ ID NO:5) or

(d) the complement of (a), (b), (c).

55. An expression vector comprising the siRNA of Claim 54.

56. The expression vector of Claim 55, wherein said siRNA is operably linked to control sequences recognized by a host cell transfected with the vector.

57. A host cell comprising the expression vector of Claim 56.

58. A composition of matter comprising:

(a) the polypeptide of Claim 10;

(b) the chimeric polypeptide of Claim 12;

(c) the antibody of Claim 14,

(d) the oligopeptide of Claim 34;

(e) the siRNA of Claim 54 or

(e) the TASK binding organic molecule of Claim 44, in combination with a carrier.

59. The composition of matter of Claim 58, wherein said carrier is a pharmaceutically acceptable carrier.

60. An article of manufacture:

(a) a container; and

(b) the composition of matter of Claim 58 contained within said container.

61. The article of manufacture of Claim 60, further comprising a label affixed to said container, or a package insert included with said container, referring to the use of said composition of matter for the therapeutic treatment of or the diagnostic detection of a cancer.

62. A method of inhibiting the growth of a cancer cell that expresses a polypeptide having at least 80% amino acid sequence identity to:

(a) the amino acid sequence shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:4) or Figure 6 (SEQ ID NO:6); or

(b) an amino acid sequence encoded by a nucleotide sequence comprising the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3) or Figure 5 (SEQ ID NO:5); said method comprising contacting said cancer cell with an antibody, oligonucleotide, siRNA, oligopeptide or organic molecule that binds to said polypeptide in said cancer cell, thereby inhibiting the growth of said cancer cell.

63. The method of Claim 62, wherein said antibody is a monoclonal antibody.

64. The method of Claim 62, wherein said antibody is an antibody fragment.

65. The method of Claim 62, wherein said antibody is a chimeric or a humanized antibody.

66. The method of Claim 62, wherein said antibody, oligonucleotide, oligopeptide, siRNA or organic molecule is conjugated to a growth inhibitory agent.

67. The method of Claim 62, wherein said antibody, oligonucleotide, oligopeptide, siRNA or organic molecule is conjugated to a cytotoxic agent.

68. The method of Claim 67, wherein said cytotoxic agent is selected from the group consisting of toxins, antibiotics, radioactive isotopes and nucleolytic enzymes.

69. The method of Claim 67, wherein the cytotoxic agent is a toxin.

70. The method of Claim 69, wherein the toxin is selected from the group consisting of maytansinoid and calicheamicin.

71. The method of Claim 69, wherein the toxin is a maytansinoid.

72. The method of Claim 62, wherein said antibody is produced in bacteria.

73. The method of Claim 62, wherein said antibody is produced in CHO cells.

74. The method of Claim 62, wherein said cancer cell is further exposed to radiation treatment or a chemotherapeutic agent.

75. The method of Claim 62, wherein said cancer cell is selected from the group consisting of a breast cancer cell, a colorectal cancer cell, a kidney cell, a lung cancer cell, an ovarian cancer cell, a central nervous system cancer cell, a liver cancer cell, a bladder cancer cell, a pancreatic cancer cell, a cervical cancer cell, a melanoma cell and a leukemia cell.

76. The method of Claim 62, wherein said cancer cell overexpresses said polypeptide as compared to a normal cell of the same tissue origin.

77. A method of therapeutically treating a mammal having a tumor comprising cells that express a polypeptide having at least 80% amino acid sequence identity to:

(a) the amino acid sequence shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:4) or Figure 6 (SEQ ID NO:6);

(b) an amino acid sequence encoded by a nucleotide sequence comprising the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3) or Figure 5 (SEQ ID NO:5);

said method comprising administering to said mammal a therapeutically effective amount of an antibody, oligopeptide (siRNA) or organic molecule that binds to said polypeptide, thereby effectively treating said mammal.

78. The method of Claim 77, wherein said antibody is a monoclonal antibody.

79. The method of Claim 77, wherein said antibody is an antibody fragment.

80. The method of Claim 77, wherein said antibody is a chimeric or a humanized antibody.

81. The method of Claim 77, wherein said antibody, oligopeptide, siRNA or organic molecule is conjugated to a growth inhibitory agent.

82. The method of Claim 77, wherein said antibody, oligopeptide, interfering RNA (siRNA) or organic molecule is conjugated to a cytotoxic agent.

83. The method of Claim 82, wherein said cytotoxic agent is selected from the group consisting of toxins, antibiotics, radioactive isotopes and nucleolytic enzymes.

84. The method of Claim 82, wherein the cytotoxic agent is a toxin.

85. The method of Claim 84, wherein the toxin is selected from the group consisting of maytansinoid and calicheamicin.

86. The method of Claim 84, wherein the toxin is a maytansinoid.

87. The method of Claim 77, wherein said antibody is produced in bacteria.

88. The method of Claim 77, wherein said antibody is produced in CHO cells.

89. The method of Claim 77, wherein said tumor is further exposed to radiation treatment or a chemotherapeutic agent.

90. The method of Claim 77, wherein said tumor is a breast tumor, a colorectal tumor, a lung tumor, an ovarian tumor, a central nervous system tumor, a liver tumor, a bladder tumor, a pancreatic tumor, or a cervical tumor.

91. A method of determining the presence of a polypeptide in a sample suspected of containing said polypeptide, wherein said polypeptide has at least 80% amino acid sequence identity to:

(a) the amino acid sequence shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:4) or Figure 6 (SEQ ID NO:6); or

(b) an amino acid sequence encoded by a nucleotide sequence comprising the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3) or Figure 5 (SEQ ID NO:5), said method comprising exposing said sample to an antibody, oligopeptide, siRNA, oligonucleotide or organic molecule that binds to said polypeptide and determining binding of said antibody, oligopeptide, siRNA, oligonucleotide or organic molecule to said polypeptide in said sample.

92. The method of Claim 91, wherein said sample comprises a cell suspected of expressing said polypeptide.

93. The method of Claim 92, wherein said cell is a cancer cell.

94. The method of Claim 92, wherein said antibody, oligopeptide or organic molecule is detectably labeled.

95. A method of diagnosing the presence of a tumor in a mammal, said method comprising detecting the level of expression of a gene encoding a polypeptide having at least 80% amino acid sequence identity to:

(a) the amino acid sequence shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:4) Figure 6 (SEQ ID NO:6); or

(b) an amino acid sequence encoded by a nucleotide sequence comprising the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3) or Figure 5 (SEQ ID NO:5), in a test sample of tissue cells obtained from said mammal and in a control sample of known normal cells of the same tissue origin, wherein a higher level of expression of said polypeptide in the test sample, as compared to the control sample, is indicative of the presence of tumor in the mammal from which the test sample was obtained.

96. The method of Claim 95, wherein the step detecting the level of expression of a gene encoding said polypeptide comprises employing an oligonucleotide in an *in situ* hybridization or RT-PCR analysis.

97. The method of Claim 95, wherein the step detecting the level of expression of a gene encoding said polypeptide comprises employing an antibody in an immunohistochemistry analysis.

98. A method of diagnosing the presence of a tumor in a mammal, said method comprising contacting a test sample of tissue cells obtained from said mammal with an antibody, oligopeptide or organic molecule that binds to a polypeptide having at least 80% amino acid sequence identity to:

(a) the amino acid sequence shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:4) or Figure 6 (SEQ ID NO:6); or

(b) an amino acid sequence encoded by a nucleotide sequence comprising the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3) or Figure 5 (SEQ ID NO:5); and detecting the formation of a complex between said antibody, oligopeptide, siRNA, oligonucleotide or organic molecule and said polypeptide in the test sample, wherein the formation of a complex is indicative of the presence of a tumor in said mammal.

99. The method of Claim 98, wherein said antibody, oligopeptide, siRNA, oligonucleotideor organic molecule is detectably labeled.

100. The method of Claim 98, wherein said test sample of tissue cells is obtained from an individual suspected of having a cancerous tumor.

101. A method for treating or preventing a cell proliferative disorder associated with increased expression or activity of a polypeptide having at least 80% amino acid sequence identity to:

(a) the amino acid sequence shown in Figure 2 (SEQ ID NO:2), Figure 4 (SEQ ID NO:4) or Figure 6 (SEQ ID NO:6); or

(b) an amino acid sequence encoded by a nucleotide sequence comprising the nucleotide sequence shown in Figure 1 (SEQ ID NO:1), Figure 3 (SEQ ID NO:3) or Figure 5 (SEQ ID NO:5), said method comprising administering to a subject in need of such treatment an effective amount of an antagonist of a TASK polypeptide. Preferably, the cell proliferative disorder is cancer.

102. The method of Claim 101, wherein said antagonist is an anti-TASK polypeptide antibody, TASK binding oligopeptide, TASK siRNA, TASK binding organic molecule or antisense oligonucleotide.